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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT PAPER NUMBER

2672

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

09/539,343

Applicant(s)

MACRI ET AL.

Examiner

Motilewa A. Good-Johnson

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/02/2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to the following communications: Application, filed on 03/31/2000; Preliminary Amendment A, filed 10/18/200; Amendment B, filed 10/29/2002; Supplementary Amendment C, filed 12/02/2002.

This action is made final.

2. Claims 1-30 are pending in this application. Claims 1, 9, 11, 18, 20, 27 and 29 are independent claims. Claims 1, 7, 9-11, 16, 18-20, 25, 27 and 29 have been amended.

3. The present title of the application is "Trimming Surfaces" (as originally filed).

Drawings

4. The corrected or substitute drawings were received on 03/22/2001. These drawings are objected.

5. Figure 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Stevens et al., U.S. Patent Number 5,701,404, "Method and System for Efficiently Trimming a Nurbs Surface with a Projected Curve", class 345/423, 12/23/1997.

As per independent claim 1, Stevens discloses defining trim regions on NURBS surfaces where a three-dimensional projected curve intersects the surface, and further discloses the trim regions in a U,V domain of the surface, col. 1, et seq.

With respect to dependent claim 2, Stevens discloses a surface after it has been trimmed, figure 3C.

With respect to dependent claim 3, Stevens discloses drawing the pixels only in a solid portion and not the trimmed portion, figure 3C.

With respect to dependent claim 4, Stevens discloses in figure 3B and figure 3C a first portion containing the trimmed region and a second portion containing the surface without the trimmed section.

With respect to dependent claim 5, Stevens discloses drawing the projection of the curve onto the surface in the U,V domain for the surface, figures 4 and 8.

With respect to dependent claim 6, Stevens discloses performing the curves projected onto surfaces in real time, col. 2, lines 20-27.

With respect to dependent claim 7, Stevens does not explicitly disclose drawing a material texture on the surface. However, it is inherent that while Stevens discloses performing trim regions in a U, V domain, which is known in the art as a texture domain, a material texture would be drawn on the surface.

With respect to dependent claim 8, Stevens discloses curves in a U,V domain defining the trim regions, col. 2, lines 30-49.

As per independent claim 9, Stevens discloses a NURBS surface trimmed by projecting closed 3D curves into the domain to define trim regions, and discloses a trim region defined as a hole or a boundary on the surface, col. 5, lines 15-44. Stevens further discloses an isometric wire frame of a NURBS surface showing boundaries defining trim regions determined by projecting a circle onto the surface, figure 4.

With respect to dependent claim 10, Stevens does not explicitly disclose obtaining a material texture and drawing the material texture on the surface. However, it is inherent that while Stevens discloses performing trim regions in a U, V domain, which is known in the art as a texture domain, a material texture would be obtained and drawn on the surface.

As per independent claim 11, "an article comprising a computer-readable medium . . .", it is rejected based upon similar rational as above independent claim 1, Stevens also discloses executable computer instructions, col. 6, lines 1-15.

With respect to dependent claims 12-17 they are rejected based upon similar rational as above dependent claims 2-5, 7 and 8 respectively.

As per independent claim 18, "an article comprising a computer-readable medium . . .", it is rejected based upon similar rational as above independent claim 9, Stevens also discloses executable computer instructions, col. 6, lines 1-15.

With respect to dependent claim 19, it is rejected based upon similar rational as above dependent claim 10.

As per independent claim 20, "an apparatus for use in trimming . . .", it is rejected based upon similar rational as above independent claim 1, Stevens also discloses an apparatus containing a memory and a processor, col. 6, lines 1-15.

With respect to dependent claims 21-26 they are rejected based upon similar rational as above dependent claims 2-5, 7 and 8 respectively.

As per independent claim 27, "an apparatus . . .", it is rejected based upon similar rational as above independent claim 9, Stevens also discloses an apparatus comprising executable computer instructions, col. 6, lines 1-15.

With respect to dependent claim 28, it is rejected based upon similar rational as above dependent claim 10.

As per independent claim 29 and dependent claim 30, they are rejected based upon similar rational as above independent claim 1 and dependent claim 5.

Response to Arguments

8. Applicant's arguments filed 10/29/2002 have been fully considered but they are not persuasive.

Applicant argues that Stevens fails to disclose applying the trimming texture by texture mapping the trimming texture onto the parametric surface. Stevens discloses in col. 2, a surface represented in the U, V domain. It is well known in the art that a surface coordinate is represented as S, T coordinate space and that in texture mapping a U, V coordinate space or domain represents the texture map. See enclosed Foley

reference, pages 741-743, surface detail. Therefore it is inherent that the texture map on the parametric surface would be trimmed in the trim region as well as the surface. Applicant further argues that Stevens draws curve segments onto a surface and not texture onto a surface. As stated above, Stevens discloses a surface in a U, V domain, i.e. texture coordinate space, and thus making it inherent that the trimming portion would constitute a trimming texture.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj
January 27, 2003


JEFFERY A. BRIER
PRIMARY EXAMINER